

U.S. Patent Application Serial No. 10/612,990
Response filed September 5, 2006
Reply to OA dated June 5, 2006

REMARKS

Claims 2 - 10 are canceled in this patent application, without prejudice or disclaimer.
Independent claim 1 remains in this patent application.

Claim 1 has been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicant regards as his invention. The applicant respectfully submits that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated June 5, 2006.

Claim 1 is rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,465,742 to Hiraoka. The Examiner again alleges that Hiraoka discloses the claimed invention and refers to Hiraoka's Figure 4A, as showing the claimed invention. The Examiner takes the position that the limitation in the claim that the conductive sections be "regulated by abraiding" is a process limitation in a device claim; thus, according to the Examiner, such claimed limitation is only considered to the extent that the process impacts the structure. The Examiner comments on the previous response, pointing out that Hiraoka discloses at col. 37, lines 15-25: "a wiring sheet in which a wiring consisting of a two dimension pattern (cable pattern) having a wiring width of 20 μm and a land (land pad) diameter of 50 μm ." Thus, it is the position of the Examiner that Hiraoka does indeed disclose each and every limitation of the claimed invention.

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The applicant respectfully requests reconsideration of this rejection.

It is the applicant's position that the applicant's instant claimed invention is distinguishable over the structure of Hiraoka in regard to the material of the insulating layers. The structure of Hiraoka's device is fabricated by laminating a plurality of "porous body" layers. Each porous body layer has a substance loaded into some of its pores in order to form electric conductive sections. The porous body material remains in the finished product. Some pores may be filled with a material different from electric conductive material; such as, an insulating material.

In the applicant's instant claimed invention, the insulating layer is disclosed as being a polyethylene film covered with an insulating material (see, page 11, lines 15-23 of the applicant's specification). The materials of the present insulating layer are not porous bodies. A product of the present invention differs physically from a product taught by Hiraoka, as the structure forming the pores of the porous body material would still be present in the product of Hiraoka even if the pores were filled with some substance. A product of the applicant's present claimed invention and a product as taught by Hiraoka could thus be physically distinguished from one another.

In order to distinguish the instant claimed invention over Hiraoka, the applicant has amended independent claim 1 so as to highlight that the first and second insulating layers are of a non-porous body material. It is the applicant's position that a polyethylene film covered with an insulating material is not a porous body material.

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The applicant further submits that in Hiraoka, photonic crystals, in which hollow spaces are filled with photosensitive substances, are three-dimensionally exposed to form cable patterns. An insulating substrate, in which a cable layer is formed, is made of a porous material.

Moreover, in Hiraoka, the cable layer (a cable sheet) and a via layer (a via sheet) are separately formed and layered so as to form a multilayered circuit board. The cable sheet and the via sheet are also made of the porous material. Therefore, the applicant reiterates that the non-porous body material that makes up the claimed first and second insulating layers is distinguishable over the material of the cable layer disclosed in the Hiraoka reference.

Also, the instant claimed invention does not relate to a method of producing the circuit board. However, if the cable sheet and the via sheet are made of the photosensitive porous material, the method of producing the circuit board is quite different from the present invention.

Since not all of the claimed elements, as now recited in independent claim 1, are found in exactly the same situation and united in the same way to perform the identical function in Hiraoka's apparatus, there can be no anticipation under 35 USC §102(e) of the claimed invention, as now set forth in independent claim 1, based on the teachings of Hiraoka.

Accordingly, the withdrawal of the outstanding anticipation rejection under 35 USC §102(e) based on U.S. Patent No. 6,465,742 to Hiraoka is in order, and is therefore respectfully solicited.

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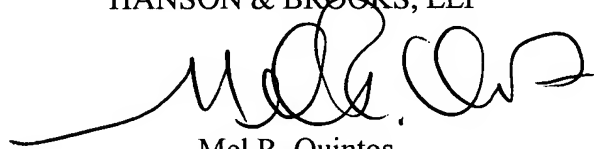
In view of the aforementioned amendments and accompanying remarks, claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper to Deposit Account No. 01-2340.

Respectfully submitted,

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